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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|--------------------------|---------------------|------------------|
| 09/551,962 | 04/19/2000 | Henry Esmond Butterworth | GB9-1999-0117US1 | 3838 |

7590 11/20/2003
 Jay p Sbröllini
 IBM Corp IP Law Dept
 T J Watson Research Center PO Box 218
 Yorktown Heights, NY 10598

EXAMINER

CHANG, JUNGWON

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2154 | 6 |

2154

6

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PRE

Office Action Summary

| | | |
|-------------------------------|------------------------------------|--|
| Application No. 09/551,962 | Applicant(s) BUTTERWORTH ET AL. | |
| Examiner Jungwon Chang | Art Unit 2154 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on amendment filed 9/8/03.
- 2a) This action is FINAL.
- 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 - * See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) Interview Summary (PTO-413) Paper No(s). _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other:

FINAL ACTION

1. Claims 1-4 have been amended and claims 1-4 are presented for examination.
2. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior action.
3. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Platko et al. (US 6,330,658 B1), hereinafter Platko, in view of Kozlowski et al. (US 6,513,070 B1), Hereinafter Kozlowski.
4. As to claims 1 and 4, Platko discloses the invention substantially as claimed, including a data processing system (col. 1, lines 22-24) comprising:
 - a master processor (16, fig. 1; col. 2, lines 18-19);
 - a slave processor (18, fig. 1; col. 2, line 25);
 - a memory (20, fig. 1; col. 2, lines 19-20); and
 - a bus subsystem interconnecting the master processor, the slave processor, and the memory (fig. 1; col. 2, lines 18-30; col. 3, lines 20-25);wherein the master processor is configured to generate, in response to a memory access instruction (i.e., read, write; col. 4, line 64 – col. 5, line 13), a read request (col. 2, lines 45-49; col. 5, lines 35-47) comprising a read command for execution by the slave processor to read data stored in a location in the memory

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specified by the memory access instruction (col. 2, lines 32-35), and to write the read request to the slave processor via the bus subsystem (col. 2, lines 35-37), and the slave processor is configured to execute the read command received in the read request from the master processor to obtain the data stored at the specified location in the memory (col. 6, lines 3-24) and to write the data obtained to the master processor via the bus subsystem (col. 5, lines 35-44; col. 6, lines 3-24).

5. Platko does not specifically disclose allowing a master processor to continue other processing operations and tasks while slave processor is reading the memory. However, Kozlowski discloses allowing a master processor to continue other processing operations and tasks while slave processor is reading the memory (col. 1, lines 45-50 and 64-67; col. 2, lines 1-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Platko and Kozlowski because Kozlowski's DMA operation would reduce latency by allowing the master processor to perform other tasks while data is being reading/writing (col. 1, lines 45-50 and 64-67; col. 2, lines 1-8).

6. As to claim 2, Platko discloses wherein the bus system comprises two buses interconnected by a bridge device (col. 2, lines 26-27).

7. As to claim 3, Platko discloses the invention substantially as claimed in claims 1 and 4. In addition, Platko discloses a disk controller (46, fig. 1; col. 5, lines 49-52).

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8. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

9. In the remarks, applicants argued in substance that

(1) Platko reference does not allow the master processor to continue other processing operations and tasks while the slave processor is reading the memory.

(2) The "master processor" in the present invention is a high performance processor which is entirely consumed while waiting for the data transfer, and is therefore expensive.

(3) In the cited prior art reference Platko, the master processor is synchronously sequencing the operation of the slave processor. Whereas, in the present invention, the master processor is sending an asynchronous request to the slave processor and the slave processor is coming back with an asynchronous replay.

10. Examiner respectfully traverses applicants' remark.

As to point (1), please see paragraph 5 above.

As to points (2) and (3), In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., asynchronous, high performance processor) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

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limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jungwon Chang whose telephone number is (703)305-9669. The examiner can normally be reached on 8:30-6:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703)308-9052. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703)746-7239 for regular communications and (703)746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-9669.

Jungwon Chang
November 13, 2003



MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100